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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,219	08/18/2003	Shih-Chang Ku	BHT-3167-150	2219

7590 11/08/2005
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EXAMINER

THOMPSON, GREGORY D

ART UNIT PAPER NUMBER

2835

DATE MAILED: 11/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/642,219

Applicant(s)

KU, SHIH-CHANG

Examiner

Gregory D. Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on filing on 8/18/03 and election on 8/29/0.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 3,4 and 7-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. Applicant's election without traverse of Figs. 7A-7B and 9 with claims 1-11 readable thereon in the reply filed on 8/29/05 is acknowledged.

Claims 3 - 4 and 7-11 with drawn from consideration since they read on non-elected Species II Figs. 8 and 9 not elected Figs. 7A-7B and 9. For example, fin 61 in Figs. 7A-7B is not spaced from chip 11 by a predetermined space as claimed in claims 3 and 7 and fin 61 in Figs. 7A-7B has no bottom portion having at least one opening for the encapsulant to fill as claimed in claims 8 and 10.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2 and 5-6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hsu et al.

Hsu et al teaches an IC package (Figs. 4.1-5.3) having an encapsulant 5 having a PCB side (the side where substrate 1 with balls 6 would be mounted on a PCB), chip 2 inside the encapsulant 5 and a heat dissipation fin (broad term) 82 or 82' implanted in 5 directly contacting chip 2 and having a metal portion 8 or 8' thereof extending outside the open side of 5 (side where 82 and 82' would enter into the encapsulant 5). The fin 82 or 82' is implanted into encapsulant 5 before the encapsulant is cured at a predetermined position with the fin 82 or 82' above chip 2 with the encapsulant 5 and

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fin 82 or 82' held in position (broad term) by gravity for example before the encapsulant 5 is cured.

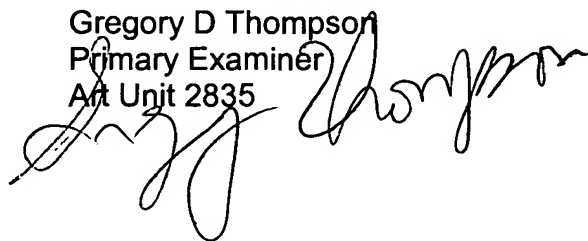
4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rostoker et al and Mostafazadeh et al teach packages.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory D. Thompson whose telephone number is (571) 272-2045. The examiner can normally be reached on Mon-Thur from 6:00AM to 4: PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild, can be reached on (571) 272-2800, ext. 35. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gregory D Thompson
Primary Examiner
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A handwritten signature in black ink, appearing to read 'Gregory D. Thompson', is written over the printed name and title.

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